

Glossary

This glossary defines some of the terms used throughout this issue. Definitions are simplified and based on Malcolm and Malcolm (2000) and Scott and Stone (1976), to which readers are referred for more detailed definitions.

- Acuminate** tapering to a long narrow point.
- Alar cells** specialized cells at the corners of moss leaf bases. These are different from other leaf cells in size, shape, colour, thickness or wall ornamentation.
- Anticlinal** perpendicular to the surface.
- Antheridium** (plural antheridia) male reproductive organ containing sperm (antherozoids).
- Apiculus** (plural apiculi) an abrupt, short point at a tip or apex.
- Archegonium** (plural archegonia) flask-shaped female reproductive organ consisting of an elongated neck and swollen basal region (the venter) supported on a stalk. The venter contains an egg.
- Bracts** modified leaves surrounding the reproductive organs
- Brood bodies** any structures that function as vegetative propagules
- Caducous** falling off readily, deciduous
- Calyptra** a membranous or hairy cap formed from the wall of the archegonium after fertilization of the egg by a sperm. It protects the embryonic sporophyte and aids in control of its development.
- Capsule** the spore-bearing component of the sporophyte, i.e. the sporangium, consisting of a sterile base, a fertile spore case and usually, in mosses, a sterile lid, the operculum. The capsule is simpler in liverworts than mosses.
- Cilium** (plural cilia) a delicate hair or tooth-like structure at a margin or on a surface, or alternating with the endostomal teeth.
- Conical** cone shaped
- Costa** (plural costae) the thickened midrib or nerve of a leaf
- Cryptogam** plants that do not produce flowers or seeds and have their reproductive parts in what once were considered hidden structures. Cryptogams include the mosses, liverworts, hornworts, fungi and algae, as well as ferns and fern-allies.
- Dentate** having unicellular or multicellular teeth that are outward facing.
- Dorsal** said of the upper surface of a prostrate stem, the outer surface of a peristome tooth, the lower surface of a leaf, and the upper surface of a thallose liverwort or hornwort
- Endostome** found in many mosses, the inner peristome, normally arising from a basal membrane and consisting of segments alternating with cilia
- Epiphragm** (plural epiphragmata) a circular membrane attached to the tips of the peristome teeth, and partially closing the capsule mouth after the operculum has fallen off.
- Exostome** the outer peristome of mosses consisting of one or more rows of teeth that usually are split in two towards the tip.
- Fascicles** a bundle or cluster of structures, e.g. leaves, branches, propagules.
- Gametophyte** the haploid multicellular gamete producing generation.
- Gemma** (plural gemmae) a type of vegetative propagule composed of only a few cells.
- Hairpoint** a hair-like leaf tip in mosses formed by a costa projecting well beyond the end of the leaf blade, or by a protracted tapering of the blade tip.
- Hyaline** colourless and transparent or nearly so.
- Hygroscopic** readily absorbing moisture, said of moss peristome teeth that bend in and out in response to humidity.
- Marsupium** (plural marsupial) a swollen and elongated pouch-like structure enclosing the sporophyte.
- Obtuse** blunt with the sides making an angle of more than 90°.
- Operculum** (plural opercula) in mosses, the lid that covers the capsule mouth; in liverworts, the apical portion of the sporangium which opens during dehiscence.
- Ovate** egg-shaped.
- Papilla** (plural papillae) a local thickening of the cell wall or a mucilage-secreting cell in some liverworts.

Perichaetium (plural perichaetia) a cluster of bracts surrounding the archegonium and later the base of the seta.

Periclinal parallel orientation to the surface.

Perigonium (plural perigonia) a cluster of bracts surrounding the antheridium.

Peristome the ring or rings of teeth inside the mouth of the capsule.

Pluriverous able to occur on a wide variety of substrates.

Polysctous a state in mosses where more than one sporophyte at the apex of a single branch each with its own calyptra.

Protonema (plural protonemata) branched algal-like filaments or plate-like growths arising from the spores and from which erect shoots form.

Recurved curved backward or downward, as in leaves.

Rhomboid of cells, quadrilateral in surface view or nearly so, with the lateral angles obtuse.

Seta the stalk or structure of the sporophyte carrying the capsule.

Sigmoid relating to cell outlines that have a slight s-twist; curved in opposite directions at the two ends of the cells.

Sporophyte the diploid multicellular spore producing generation.

Soil crust crust-like covering on the soil that maintains landscape stability. Usually comprised of bryophytes, lichens, algae and fungi.

Spiral arranged in the pattern of a snail shell or corkscrew

Thallus a plant body formed as a flat plate or sheet of tissue.

Trabeculae cross bars or projections on the back of a tooth of the exostome or the slender support strands that prevent air-chambers from collapsing in a number of thalloid liverworts.

Tracheophyte vascular plant.

Venter swollen basal structure of the archegonium, contains the egg.

Warty having small protuberances

References

- Malcolm B and Malcolm N (2000) Mosses and other bryophytes, an illustrated glossary. (Micro-optics Press: Nelson, New Zealand)
Scott GAM and Stone IG (1976) The Mosses of Southern Australia. (Academic Press: New York)

One hundred and fourteen years ago

DESCRIPTION, COLLECTION, AND PRESERVATION OF MOSSES

BY R.A. BASTOW

'...The great natural order of mosses is ever at our side. On almost every wall top these tiny plants rear their capsules, holding them aloft to inhale the passing breeze or to reap the benefit of the maturing sun-ray; as we wander through the fields they are under our feet, forming a carpet far more luxurious than that of any Oriental loom; they are over our heads as we thread our way through the bush; they throw a gentle mantle over their brethren of larger growth, and who have succumbed to the stormy blast, that none may mock the dead; they enlighten the storm-beaten cliff of sombre grey; they glisten on the sides and roof of the cavern; they twirl in the purling stream; and form a glad luxuriance of humble beauty in niche, on bank, on rock, and everywhere.'

'COLLECTION OF MOSSES. — In the autumn and winter months the mosses in low-lying localities will generally be found in their greatest perfection, whilst in the spring and summer months those growing in more or less mountainous districts are at their best, and it is probable that Victoria is as highly favoured as any country in the world for its vast profusion of mosses. Extensive plains, alpine and sub-alpine heights, damp forests, and fern-tree gullies are characteristic of the colony; there is, therefore, every inducement to make a closer acquaintance with such delightful forms. A necessary equipment for such excursions consists of a good pocket lens, a large knife, capacious pockets, a piece of carpet or oilcloth, and some papers cut in squares to wrap each specimen in.'

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